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ABSTRACT OF THE DISCLOSURE

On a copper wiring surface, an oxidation resistive and fluorinated acid resistive layer is formed, and an oxidation resistive copper wiring, enhancement of resistive fluorinated acid nature are achieved. Furthermore, a via-hole connection resistance is reduced, and a clad layer (the CoWP layer) having oxidation resistive and fluorinated acid resistive nature high copper wiring configuration is formed, and cover layer (the CoWP layer) including cobalt and the CoWP layer of reliability, and the CoWP layer is formed by the copper wiring.